



Emergency Airworthiness Directive

AD No.: 2016-0247-E

Issued: 14 December 2016

Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

ROLLS-ROYCE plc

Type/Model designation(s):

Trent XWB engines

Effective Date: 15 December 2016

TCDS Number(s): EASA.E.111

Foreign AD: Not Applicable

Supersedure: None

ATA 73 – Engine Fuel & Control – P30 Sense Line Air Tube – Drainage / Inspection

Manufacturer(s):

Rolls-Royce plc (RR)

Applicability:

RR Trent XWB-75, Trent XWB-79, Trent XWB-79B and Trent XWB-84 engines, all serial numbers.

These engines are known to be installed on, but not limited to, Airbus A350 aeroplanes.

Reason:

RR previously introduced Non-Modification Service Bulletin (NMSB) TRENT XWB 73-H925 to provide instructions for repetitive inspections of P30 sense line air tubes for water accumulation, but without any instructions to offset inspections on the other engine on the same aeroplane. Following a recent review of in-service anomalous bleed valve fault messages, RR identified an error in the Engine Electronic Control (EEC) software that leads to failure of the EEC to accommodate a static P30 signal, which can occur as a result of an unusually high volume of frozen water inside the sense line air tube, possibly limiting thrust control of the engine. Unusually high volumes of water present in the P30 sense line air tubes occurring in both engines could result in a dual engine risk on an aeroplane. This is not currently mitigated by NMSB TRENT XWB 73-H925.

This condition, if not detected and corrected, could result in reduced control of that aeroplane.



To address this potential unsafe condition, RR published Alert NMSB TRENT XWB 73-AJ578 to introduce an offset of inspection between engines on the same aeroplane to prevent a common mode of loss of thrust control, and also to introduce additional measures to ensure that no potential air leakage paths can exist or develop which could exacerbate water accumulation as a result of previous inspections.

For the reasons described above, this Emergency AD requires a one-time on-wing inspection and drainage of the P30 sense line air tubes. This AD is considered an interim action and further AD action may follow.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Note 1: Where, in this AD, reference is made to a RR SB or NMSB with an 'A' (Alert) in the number, it should be recognised that an earlier or later revision may not have that 'A'. This kind of change does not effectively alter the publication references for the purpose of this AD.

Note 2: RR Alert NMSB TRENT XWB 73-AJ578 is hereafter referred to as 'the NMSB' in this AD.

Note 3: For the purpose of this AD, Group 1 engines are those that have an engine serial number (ESN) identified in Appendix 1 of the NMSB, and have previously been inspected in accordance with the instructions of RR NMSB TRENT XWB 73-H925 (original issue or Revision 1). Group 2 engines are those that have any ESN, and have not previously been inspected in accordance with the instructions of RR NMSB TRENT XWB 73-H925 (original issue or Revision 1).

For Group 1 engines:

Inspection / Drainage:

- (1) Within 7 days after the effective date of this AD, inspect and drain the P30 sense line air tube of any engine in the No.1 position on an aeroplane, including an independent over-check of the fitting of a new sealing ring and torque application, in accordance with the instructions of Section 3 of the NMSB.
- (2) Within the compliance time specified in Table 1 of this AD, inspect and drain the P30 sense line air tube of the engine in the No.2 position on an aeroplane, including an independent over-check of the fitting of a new sealing ring and torque application, in accordance with the instructions of Section 3 of the NMSB.

Table 1 – No.2 Position Group 1 Engine Inspection

No.1 Engine	Compliance Time
Group 2 (not inspected)	Within 40 engine flight cycles (EFC) after the effective date of this AD, but not before accumulating 20 EFC after the effective date of this AD.
Group 1 (inspected)	Within 40 engine flight cycles (EFC) after the inspection as required by paragraph (1) of this AD, but not before accumulating 20 EFC after the inspection as required by paragraph (1) of this AD.



Corrective Action(s):

- (3) If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, deformation of a P30 sense line air tube is detected, before next flight, replace the affected P30 sense line air tube and its sealing ring with serviceable parts, including an independent over-check of the fitting of a new sealing ring and torque application, in accordance with the instructions of Section 3 of the NMSB.

Engine Installation:

- (4) From the effective date of this AD, it is allowed to install a Group 1 engine (see Note 3 of this AD) on an aeroplane, provided that the P30 sense line air tube of that engine was drained and passed an inspection in accordance with the instructions of Section 3 of the NMSB.

For Group 1 and Group 2 engines:**Parts Installation:**

- (5) From the effective date of this AD, it is allowed to install a P30 sense line air tube on an engine, provided the part is serviceable, and during installation, actions are accomplished in accordance with the instructions of Section 3, paragraphs (2)(b) and (2)(d), of the NMSB.

Prohibition:

- (6) From the effective date of this AD, do not inspect any engine in accordance with the instructions of RR NMSB TRENT XWB 73-H925 at original issue or Revision 1.

Ref. Publications:

RR Alert NMSB TRENT XWB 73-AJ578 original issue dated 12 December 2016.

The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. The results of the safety assessment have indicated the need for immediate publication and notification, without the full consultation process.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact your designated Rolls-Royce representative, or download the publication from your Rolls Royce Care account at <https://customers.rolls-royce.com>.

If you do not have a designated representative or Rolls Royce Care account, please contact **Corporate Communications** at **Rolls-Royce plc**, P.O. Box 31, Derby, DE24 8BJ, United Kingdom Telephone +44 (0)1332 242424,



or send an email through http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to **Airworthiness Directives**.

